

Claims:

1. A method of treating tissue comprising orienting an ultrasound transducer at a first longitudinal orientation and a first angular orientation adjacent the treatment region, exciting the transducer to ablate tissue adjacent the first longitudinal orientation and the first angular orientation within the treatment region, orienting the transducer at a second longitudinal orientation and the first angular orientation adjacent the treatment region, exciting the transducer to ablate tissue adjacent the second longitudinal orientation and the first angular orientation within the treatment region, orienting the transducer at the first longitudinal orientation and a second angular orientation adjacent the treatment region, and exciting the transducer to ablate tissue adjacent the first longitudinal orientation and the second angular orientation within the treatment region.
2. A method of treating tissue comprising orienting an ultrasound transducer at a first longitudinal orientation and a first angular orientation adjacent the treatment region, exciting the transducer to ablate tissue adjacent the first longitudinal orientation and the first angular orientation within the treatment region, orienting the transducer at a second longitudinal orientation and a second angular orientation adjacent the treatment region, and exciting the transducer to ablate tissue adjacent the second longitudinal orientation and the second angular orientation within the treatment region.
3. The method of claim 1 or 2 wherein orienting the transducer at a first longitudinal orientation and a first angular orientation includes positioning a catheter including a lumen adjacent the treatment region, substantially maintaining the position of the catheter adjacent the treatment region, and passing the transducer into the lumen so that the transducer is oriented adjacent the treatment region.
4. The method of claim 3 further including providing an indicator for indicating the longitudinal and angular orientation of the transducer.
5. The method of claim 1 or 2 further including providing an indicator for indicating the longitudinal and angular orientation of the transducer.
6. The method of claim 5 further including providing a drive system for driving the transducer, providing the transducer and providing the drive system including providing an ultrasound transducer and drive system having a variable focal length.

7. The method of claim 4 further including providing a drive system for driving the transducer, providing the transducer and providing the drive system including providing a transducer and drive system having a variable focal length.

8. The method of claim 3 further including providing a drive system
5 for driving the transducer, providing the transducer and providing the drive system including providing a transducer and drive system having a variable focal length.

9. The method of claim 1 or 2 further including providing a drive system for driving the transducer, providing the transducer and providing the drive system including providing a transducer and drive system having a variable focal length.

10. The method of claim 3 wherein positioning a catheter adjacent the treatment region includes positioning a catheter including a balloon region adjacent the treatment region and filling the balloon region to maintain substantially the position of the catheter.

11. The method of claim 4 wherein positioning a catheter adjacent the
15 treatment region includes positioning a catheter including a balloon region adjacent the treatment region and filling the balloon region to maintain substantially the position of the catheter.

12. The method of claim 7 wherein positioning a catheter adjacent the treatment region includes positioning a catheter including a balloon region adjacent the
20 treatment region and filling the balloon region to maintain substantially the position of the catheter.

13. The method of claim 8 wherein positioning a catheter adjacent the treatment region includes positioning a catheter including a balloon region adjacent the treatment region and filling the balloon region to maintain substantially the position of the
25 catheter.

14. Apparatus for treating tissue including an ultrasound transducer for orienting at a first longitudinal orientation and a first angular orientation adjacent the treatment region, at a second longitudinal orientation and the first angular orientation adjacent the treatment region, and at the first longitudinal orientation and a second
30 angular orientation adjacent the treatment region, and a drive system for exciting the transducer to ablate tissue oriented adjacent the first longitudinal orientation and the first angular orientation within the treatment region, adjacent the second longitudinal

orientation and the first angular orientation within the treatment region, and adjacent the first longitudinal orientation and the second angular orientation within the treatment region, respectively.

15 15. Apparatus for treating tissue including an ultrasound transducer for orienting at a first longitudinal orientation and a first angular orientation adjacent the treatment region, and at a second longitudinal orientation and a second angular orientation adjacent the treatment region, and a drive system for exciting the transducer to ablate tissue oriented adjacent the first longitudinal orientation and the first angular orientation within the treatment region, and adjacent the second longitudinal orientation
10 and the second angular orientation within the treatment region, respectively.

 16. The apparatus of claim 14 or 15 further including a catheter including a lumen for positioning adjacent the treatment region, the lumen permitting passage of the transducer into the lumen so that the transducer can be oriented adjacent the treatment region.

15 17. The apparatus of claim 16 further including an indicator for indicating the longitudinal and angular orientation of the transducer adjacent the treatment region.

 18. The apparatus of claim 14 or 15 further including an indicator for indicating the longitudinal and angular orientation of the transducer adjacent the treatment
20 region.

 19. The apparatus of claim 18 wherein the transducer and the drive system together include a transducer and drive system having a variable focal length.

 20. The apparatus of claim 17 wherein the transducer and the drive system together include a transducer and drive system having a variable focal length.

25 21. The apparatus of claim 16 wherein the transducer and the drive system together include a transducer and drive system having a variable focal length.

 22. The apparatus of claim 14 or 15 wherein the transducer and the drive system together include a transducer and drive system having a variable focal length.

 23. The apparatus of claim 16 wherein the catheter includes a balloon
30 region adjacent the treatment region, filling the balloon region maintaining substantially the position of the catheter.

24. The apparatus of claim 17 wherein the catheter includes a balloon region adjacent the treatment region, filling the balloon region maintaining substantially the position of the catheter.

5 25. The apparatus of claim 20 wherein the catheter includes a balloon region adjacent the treatment region, filling the balloon region maintaining substantially the position of the catheter.

26. The apparatus of claim 21 wherein the catheter includes a balloon region adjacent the treatment region, filling the balloon region maintaining substantially the position of the catheter.